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(54) Title: RECOMBINASE FUSION PROTEIN WITH ENHANCED CELLULAR UPTAKE

(57) Abstract: The present invention relates to a fusion protein comprising a site-specific DNA recombinase domain such as Cre recombinase, and a domain containing a specific modified nuclear localization signal. The fusion protein may further comprise a protein transduction domain such as the hydrophobic FGF and basic TAT peptide. The specific nuclear localization signal - alone, or together with the protein transduction domain - promotes the cellular uptake of the recombinase. The fusion protein is a powerful tool for efficient genetic engineering of mammalian genomes. The invention further relates to DNA sequences coding for said fusion protein, methods for producing said fusion protein and its use as an agent for inducing gene targeting in a living organism or in cultured cells.

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